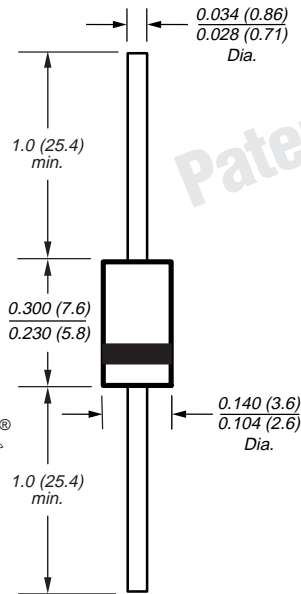


Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 200 to 1000 V
Forward Current 1.0 A

DO-204AC (DO-15)



Dimensions in inches and (millimeters)

*Glass-plastic encapsulation technique is covered by
Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- Fast switching for high efficiency
- 1.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-204AC, molded plastic over glass body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.015 oz., 0.4 g

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	1N5615GP	1N5617GP	1N5619GP	1N5621GP	1N5623GP	Units
* Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	V
* Maximum RMS voltage	V_{RMS}	140	280	420	560	700	V
* Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	A
* Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.0					A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50					A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	45					$^\circ\text{C}/\text{W}$
*Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					$^\circ\text{C}$

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	1N5615GP	1N5617GP	1N5619GP	1N5621GP	1N5623GP	Units
Maximum instantaneous forward voltage at 1.0A	V_F	1.2					V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	0.5 25					μA
*Maximum reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	t_{rr}	150		250	300	500	ns
Typical junction capacitance at 4.0V, 1MHz	C_J	25					pF

Notes:

(1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

*JEDEC registered values

1N5615GP THRU 1N5623GP



Vishay Semiconductors
formerly General Semiconductor

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 — Forward Current Derating Curves

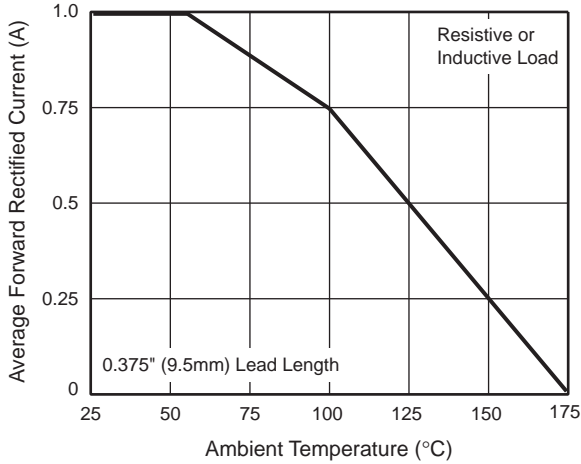


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

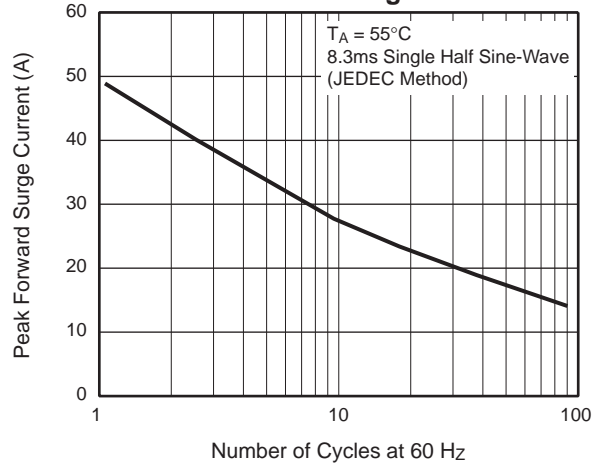


Fig. 3 — Typical Instantaneous Forward Characteristics

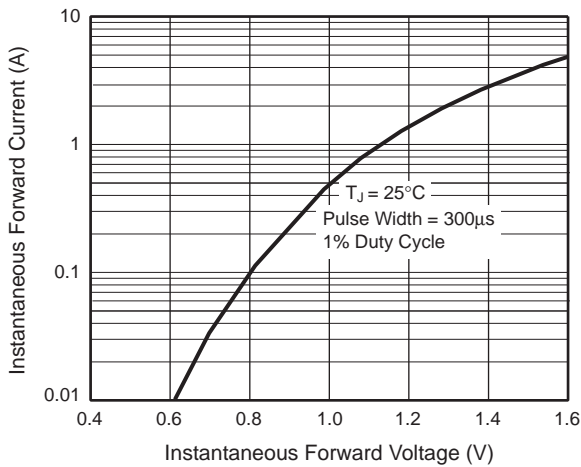


Fig. 4 — Typical Reverse Characteristics

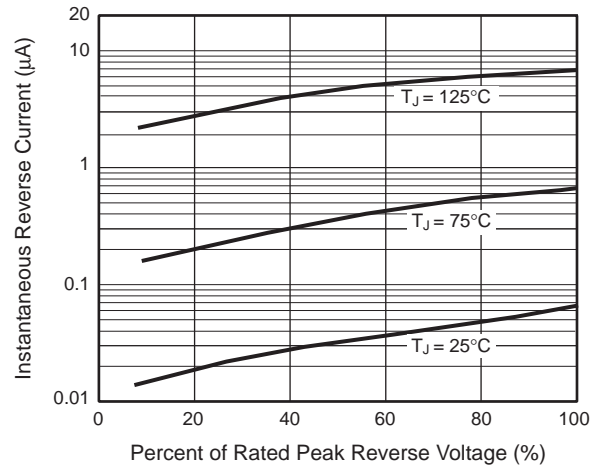


Fig. 5 — Typical Junction Capacitance

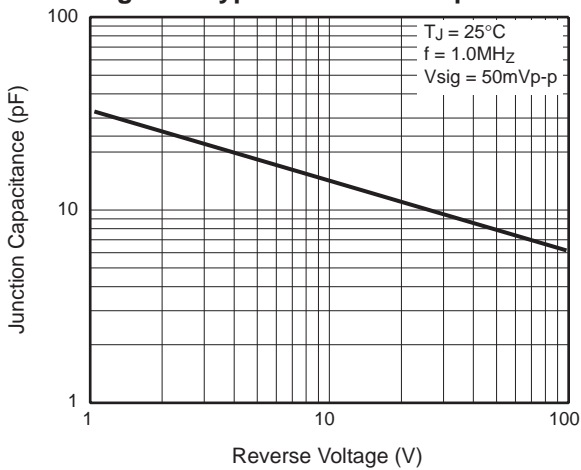


Fig. 6 — Typical Transient Thermal Impedance

